UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,262	12/31/2003	Jin-Tae Oh	3364P161	8483

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EXAMINER
POWERS, WILLIAM S

ART UNIT	PAPER NUMBER
2434	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *02 December 2008*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3,7 and 8* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1,3,7 and 8* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *06 June 2008* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☒ All   b) ☐ Some * c) ☐ None of:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/6/2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 6/6/2008 have been fully considered but they are not persuasive.

3. As to Applicant's argument that, "Rajagopal cannot be easily implemented using high-speed hardware" (Remarks, p. 7, lines 6-7), the Examiner respectfully disagrees. This argument amounts to a general refutation of the art of reference. The Applicant uses an example of the Rajagopal patent, but does not explain why it would not be easily implemented in high-speed hardware. In addition, it is pointed out that neither the ease of implementation nor high-speed hardware is present in the amended limitations.

4.   The rest of Applicant's arguments are directed to the amendments to the claims

and will be addressed below.

Response to Amendment

5.   The Examiner has stated the below column and line numbers as examples. All

columns and line numbers in the reference and the figures are relevant material and

Applicant should be taken the entire reference into consideration upon the reply to this

Office Action.

6.   Claims 2, 4-6 and 9-11 have been cancelled.

7.   Claims 1, 3 and 7 have been amended.

8.   Claims 1, 3, 7 and 8 are pending.

Drawings

9.   In light of Applicant's amendments, the previous objection to the drawings has

been withdrawn.

Claim Objections

10.   Claim 3 is objected for the use of the term "can" in the claim is not seen as a

positive recitation of a claim limitation. The term "can" introduces an optional element to

the claim limitation and is not binding. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11.   In light of the amendments, the previous 35 USC 112, 2nd paragraph rejection of

claims 5-7 have been withdrawn.

12.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

13.   Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

As to claim 1, as currently written there is no provision in the claim language to

address the situation of the last divided part. The position sequence information of a

divided part is the position of the subsequent divided part. In the case of the last divided

part, there is no subsequent divided part.

As to claim 7, according to the claim limitations as written, it appears that the

characteristic packet ID of the last two divided parts will be the same. The second to last

divided part will have a characteristic packet ID of the position sequence information of

the last divided part and the last divided part will have a characteristic packet ID of the

position sequence information of itself. Therefore, there is no difference between the

two characteristic packet IDs of the last two divided parts and the last divided part refers

to itself, thereby creating an endless loop.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

15.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
           obviousness or nonobviousness.

16.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

17.   Claims 1, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US Patent No. 7,110,540 to Rajagopal et al. (hereinafter Rajagopal) in view of US

Patent No. 5,359,724 to Earle.

    As to claim 1 as best understood, Rajagopal teaches:

    a.   Dividing a whole sentence of the pattern data into a plurality of divided

    parts having a defined length or less (portioning the byte pattern (sentence) into

    substrings (divided parts) equal to the shortest byte pattern (defined length))

    (Rajagopal, col. 2, lines 9-20).

Rajagopal teaches position information of the substrings in relation to the byte pattern

(Rajagopal, col. 2, lines 32-38), but does not expressly mention that the position

information of the divided part is the position of subsequent divided part. However, in an

analogous art, Earle teaches:

    b.   Extracting input position sequence information which is the subsequent

    position information of each divided part in the whole of each divided part of the

    pattern data (data is stored in a linked list implementation where the subsequent

piece of data is pointed to by the preceding piece of data) (Earle, col. 7, line 49-

col. 8, line 16 and figs. 6 and 7).

Therefore, one of ordinary skill in the art at the time the invention was made

would have been motivated to implement the pattern storing scheme of Rajagopal with

the linked list implementation of data storage in order to increase the speed of

accessing data and to minimize the storage needed as suggested by Earle (Earle, col.

1, lines 5-14).

Rajagopal as modified further teaches:

c.   Assigning a characteristic packet ID to each divided part of the pattern

data, and tabulating and storing in a table as table information the divided parts

of the pattern data and the position sequence information of the divided parts of

the pattern data (keys are assigned to each substring which include checksums

and position data) (Rajagopal, col. 2, lines 39-42 and fig. 2).

d.   Using the pattern data stored in the table as a look-up device for a specific

pattern in a database (comparing a string to stored byte patterns) (Rajagopal,

col. 2, lines 4-8).

As to claim 7 as best understood, Rajagopal teaches in the step (c), information

representing that the pattern data is the pattern data of a last sequence is included in

the position sequence information when the divided part of the pattern data is at a last

position (the pointer for the last node is set to a dummy (empty) data block to indicate it

is the last node) (Earle, col. 9, lines 8-23).

As to claim 8, Rajagopal teaches the pattern data are stored in a hash table, and

a hash value of each divided part of the pattern data, and sequence information of the

divided part of the pattern data are stored (hash table with items corresponding to keys,

mismatch value, checksum, byte pattern and a length value) (Rajagopal, col. 2, lines

32-42).

18.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent No. 7,110,540 to Rajagopal et al. (hereinafter Rajagopal) in view of US Patent

No. 5,359,724 to Earle as applied to claim 1 above, and further in view of US Patent No.

5,594,638 to Iliff.

As to claim 3 as best understood, Rajagopal as modified does not expressly

mention the use of meta characters. However, in an analogous art, Iliff teaches the

pattern data includes space information which represents that other words or characters

can be interposed between two words using meta characters (the meta function will

compare queries to the database using wildcard characters in order to ignore terms that

are not of interest) (Iliff, col. 43, line 33-col. 44, line 50).

Therefore, one of ordinary skill in the art at the time the invention was made

would have been motivated to implement the pattern storing scheme of Rajagopal as

modified with the meta function of Iliff in order to examiner only the fields of interest in a

record query as suggested by Iliff (Iliff, col. 43, lines 33-42).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to WILLIAM S. POWERS whose telephone number is

(571)272-8573. The examiner can normally be reached on m-f 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kambiz Zand can be reached on 571 272 3811. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. S. P./   William S. Powers
Examiner, Art Unit 2434   Examiner
                                                              Art Unit 2434

2/24/2009

       /Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2434